REMARKS

Claims 17-54 and 79-81 are pending in the application, and claims 1-16 and 55-78 have been cancelled without prejudice. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 17-54, 79-81 are rejected under 35 U.S.C. § 103(a) as being obvious over Caron (US 5,370,840) in view of JP59193233. This rejection is respectfully traversed.

Independent Claims 17 and 34

At the outset the Applicants submit that the above rejection has been rendered moot by the present amendments to claims 17 and 34, which clarify that the process includes subjecting the copper alloy to a first age anneal at a temperature of from 350℃ to 900℃ for from 1 minute to 10 hours, **removing said copper alloy from the first age anneal temperature of 350℃ to 900℃, and subsequently** annealing said copper alloy in a second age anneal at a temperature of from 300℃ to 450℃ for from one hour to twenty hours. Thus, the copper alloy is exposed to two separate age anneals, without any intervening cold working steps.

Unlike either Caron or JP59193233, claims 17 and 34 recite a copper alloy containing chromium and silver, which is formed according to a process that includes a first age anneal at 350℃ to 900℃, removing the copper alloy from the first age anneal temperature of 350℃ to 900℃, and subsequently annealing at a separate second age anneal at 350℃ to 450℃. The specification describes the claimed process in ¶ [0117], where the alloy was "subjected to a double aging annealing consisting of a first static anneal at 470° C for one hour followed by a second static anneal at 390 for six hours." One skilled in the art would understand that the step of removing said copper alloy from the first age anneal temperature of 350℃ to 900℃, and subsequently annealing said copper alloy in a second age anneal constitute two separate annealing steps. Thus,

one skilled in the art would understand this to mean two separate age anneals, since the alloy is removed from a first aging temperature and subjected to a second aging temperature.

Contrary to the claimed process, Caron teaches in Fig. 6 two separate age anneals 26 and 40 that are preceded by and succeeded by a cold roll step, and teaches away from a second stage anneal that follows a first stage anneal without any intervening cold roll step. Caron states that following aging step 36 and cold-roll step 38, an "optional second non-recrystalizing precipitation hardening anneal 40 is at a temperature of from about 450°C to about 500°C for from about 2 to 4 hours. (Caron, col. 8, ll. 43-46). Thus, Caron teaches subjecting an annealed alloy to an intervening cold rolling step, and does not teach subjecting a copper alloy to a first age anneal at a temperature of from 350°C to 900°C for from 1 minute to 10 hours, removing said copper alloy from the first age anneal temperature of 350°C to 900°C, and subsequently annealing said copper alloy in a second age anneal at a temperature of from 300°C to 450°C.

The Applicant further submits that the specification provides ample data in Tables 3 and 4 detailing the improved characteristics of alloys such as alloy J310 made according to claims 17 and 34. The specification states in ¶ [0117] that alloy J310 was "subjected to a double aging annealing consisting of a first static anneal at 470° C for one hour followed by a second static anneal at 390 for six hours," which one skilled in the art would understand to mean two separate age anneals in which the alloy is removed from a first aging temperature and subjected to a second aging temperature. Table 4 states that alloy J308, when subjected to the condition of being aged and subsequently annealed, resulted in the "commercially favorable combination of 80 ksi

yield strength and 80% IACS," as stated in ¶[0117] and indicated by the data in Table 4. Alloy J310 also resulted in similarly high yield strength and conductivity relative to the alloys disclosed in Caron, which data is indicative of an unexpected result when compared to the lower yield strength and lower conductivity values for the alloys listed in Caron.

Additionally, there is nothing in JP 59-193233 to lead one skilled in the art to select a copper alloy containing chromium and silver, and forming the alloy according to a process that includes a first age anneal at 350°C to 900°C, and a separate second age anneal at 350°C to 450°C, without any intervening cold work following the first stage anneal. Rather, JP 59-193233 lists 27 optional element additions are presented as equally suitable. The odds of one skilled in the art randomly selecting the addition of silver from the 27 optional elements discloses in JP 59-193233, and further forming a copper alloy according to a process that includes subjecting the copper alloy to a first age anneal at 350°C to 900°C, removing said copper alloy from the first age anneal temperature of 350°C to 900°C, and subsequently annealing said copper alloy in a second age anneal at a temperature of from 300°C to 450°C, is not within the realm of one skilled in the art, and would require undue experimentation.

Moreover, Table 2 of JP 59-193233 teaches away from additions of silver when seeking a combination of high strength and high electrical conductivity is desired. Alloy example 8 in JP 59-193233 shows that the addition of silver leads to a marginal strength alloy (as indicated by the triangles representing marginal results). Thus, one skilled in the art, contemplating a combination of known ingredients having known functions as stated by the Examiner, would be dissuaded by the teachings in JP 59-193233 from adding silver to obtain a copper alloy having a high conductivity and

strength. One skilled in the art also would have been led to cast a copper alloy including chromium and zirconium as taught and claimed in JP 59-193233. As such, the Applicant submits that there is nothing in JP 59-193233 that would lead one skilled in the art to select a combination of chromium and silver, and further forming a copper alloy according to a process that includes subjecting the copper alloy to a first age anneal at 350℃ to 900℃, removing said copper alloy from the first age anneal temperature of 350℃ to 900℃, and subsequently annealing said copper alloy in a second age anneal at a temperature of from 300℃ to 450℃. Thus, the Applicant submits that the Applicant's copper alloy processed as in claims 17 and 34 is not obvious.

Claims 18-33, 35-54 and 79-81

With regard to claims 18-33, 35-54 and 79-81, these claims ultimately depend from claims 17 and 34, which the applicants believe to be allowable in view of the above remarks. As such, the Applicants submit that claims 18-33, 35-54 and 79-81 are also allowable for at least these reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7500.

Respectfully submitted,

Dated: February 6, 2009

By: Kevin Pumm

Kevin Pumm, Reg. No. 49,046

HARNESS, DICKEY & PIERCE, P.L.C.
7700 Bonhomme, Suite 400
St. Louis, Missouri 63105
(314) 726-7500

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